WHAT IS CLAIMED IS:

A flash-based unit for providing code to be executed by an external processor, comprising:

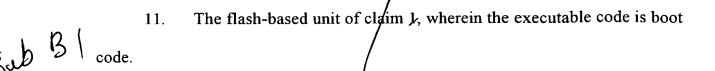
- (a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory; and
- (b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component.
- 2. The flash-based unit of claim 1, wherein the external processor is in communication with the flash-based unit by a bas, the flash-based unit further comprising:
 - (c) a logic for receiving a command to move said at least a portion of the code from said flash memory to said volatile memory component.

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- 3. The flash-based unit of claim 2, further comprising:
- (d) a power storage for storing at least a limited amount of power for supplying power to the flash-based unit if power is not otherwise available, power being drawn from said power storage when said logic determines that said power is not otherwise available.

4. The flash-based unit of claim 3, wherein said power storage provides pnly sufficient power to write data in said volatile memory to said flash memory.

- 5. The flash-based unit of claim 4, wherein said power storage is a capacitor.
- 6. The flash-based unit of claim 1, comprising a single chip for containing all components of the flash-based unit.
- 7. The flash-based unit of claim 1, comprising a single die for containing all components of the flash-based unit.
- 8. The flash-based unit of claim 1, wherein said flash memory only permits data to be read in one or more specific sizes of blocks.
- 9. The flash-based unit of claim 8, wherein said flash memory is a NAND-type flash memory.
- 10. The flash-based unit of claim 1, wherein said volatile memory component is selected from the group consisting of S-RAM and D-RAM.



the restricted non-volatile memory being characterized in that code cannot be directly executed from the restricted non-volatile memory, the system comprising:

- (a) a CPU for executing the code;
- (b) a volatile memory component in direct communication with the restricted non-volatile memory for holding at least a portion of the code to be executed, said at least a portion of the code being transferred from the restricted non-volatile memory, such that said CPU executes said at least a portion of the code from said volatile memory component.
- 13. The system of claim 12, wherein the restricted non-volatile memory is a flash memory.
- 14. The system of claim 13, wherein said flash memory only permits data to be read in one or more specific sizes of blocks.
- 15. The system of claim 14, wherein said flash memory is a NAND-type flash memory.

16. The system of claim 13, wherein said volatile memory component is selected from the group consisting of S-RAM and D-RAM.

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17. The system of claim 16, wherein the executable code is boot code.

18. (a)

A system for executing code, comprising:

a flash-based unit for storing the code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that code cannot be directly executed from said flash memory and a volatile memory component for receiving a portion of the code to be executed; and

(b) a processor for executing the code, said processor receiving at least said portion of the code from said volatile memory component;

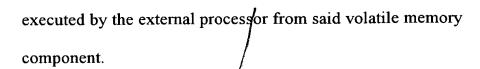
wherein an additional memory component is not required for executing the code by said processor.

19. A method for booting a system, the system featuring a processor for executing code, the method comprising:

providing a flash-based unit in the system for storing the code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that code cannot be directly executed from said flash memory, and avolatile memory component for receiving a portion of the code to be executed;

sending a busy signal to said processor;
transferring said portion of the code to said volatile memory component;
removing said busy signal; and
executing said portion of the code by said processor to boot the system.

- 20. A flash-based unit for providing code to be executed by an external processor, consisting essentially of:
 - (a) a flash memory for storing the code to be executed, said flash memory being of a type such that the code cannot be executed in place from said flash memory; and
 - (b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is executed by the external processor from said volatile memory component.
- 21. A flash-based unit for providing code to be executed by an external processor, comprising:
 - (a) a flash memory for storing the code to be executed, said flash memory being of a type such that the external processor cannot read the code to be executed directly from said flash memory; and
 - (b) a volatile memory component for receiving at least a portion of the code to be executed, such that at least said portion of the code is



22. A method for booting a system, the system featuring a processor for executing code, the method comprising:

providing a flash-based unit in the system for storing the code to be executed, said flash-based unit comprising a flash memory of a restricted type, being characterized in that code cannot be directly executed from said flash memory, and a volatile memory component for receiving a portion of the code to be executed;

transferring said portion of the code to said volatile memory component;

executing said portion ϕ f the code by said processor to boot the system.

23. The method of claim 22, wherein transferring said portion of the code to said volatile memory component further comprises:

transferring a first portion of the code to said volatile memory component, said first portion of the code containing a command for copying a second portion of the code;

executing said command by said processor; and copying said second portion of the code for booting the system.